

Agenda – Enterprise and Business Committee

Meeting Venue:

Committee Room 1 – Senedd

Meeting date: Wednesday, 25

November 2015

Meeting time: 09.15

For further information contact:

Gareth Price

Committee Clerk

0300 200 6565

SeneddEcon@Assembly.Wales

Private pre-meeting (09.15–09.30)

1 Introductions, apologies and substitutions

2 Scrutiny of the Chief Scientific Adviser for Wales

(09.30–10.30)

(Pages 1 – 28)

Professor Julie Williams, Chief Scientific Adviser for Wales

Richard Rossington, Head of Science Resilience, Risk and Government Business,
Welsh Government

Geraint Green, Head of Business and Innovation, Welsh Government

Attached Documents:

Research Brief

EBC(4)–28–15 (p.1) Evidence from the Chief Scientific Adviser for Wales

Break (10.30–10.45)

3 Scrutiny of the Innovation Advisory Council for Wales

(10.45–11.45)

(Pages 29 – 34)

Ian Menzies, Joint Chair of the Innovation Advisory Council for Wales

Adam Price, Joint Chair of the Innovation Advisory Council for Wales



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Wales

Attached Documents:

EBC(4)-28-15 (p.2) Evidence from the Innovation Advisory Council for Wales

4 Papers to note

4.1 Draft Wales Bill

(Pages 35 – 45)

Attached Documents:

EBC(4)-28-15 (p.3) Letter to the Secretary of State for Wales regarding the Draft Wales Bill in relation to the Enterprise and Business Committee

5 Motion under Standing Order 17.42 to resolve to exclude the public from the remainder of the meeting.

6 Consideration of the Legislative Consent Memorandum on the Welfare Reform and Work Bill

(11.45-11.50)

(Pages 46 – 49)

Attached Documents:

Legal Brief on the LCM – Welfare Reform and Work Bill

7 Consideration of the draft report on Rugby World Cup Transport Planning

(11.50-12.00)

(Pages 50 – 64)

Attached Documents:

Draft Report on Rugby World Cup Transport Planning

8 Spring 2016 Forward Work Programme

(12.00–12.05)

(Pages 65 – 78)

Attached Documents:

Spring 2016 Forward Work Programme

Research Brief on the European Commission Work Programme 2016

Private de-brief (12.05–12.20)

Agenda Item 2

Document is Restricted

Enterprise & Business Committee Scrutiny Session – Science, Research and Horizon 2020 Welsh Government

Purpose

To provide the Enterprise and Business Committee with evidence relating to its planned scrutiny session on Wednesday 25 November 2015 with Professor Julie Williams, the Chief Scientific Adviser for Wales (CSAW).

Science for Wales Annual Progress

Progress with the overall strategy is positive. The Innovation section of the strategy was effectively completed by the production of a separate Innovation plan with its own oversight. There have been major developments in the world of STEM education and the Welsh Government's contribution to improving Wales' research capacity is all in place or coming into place over the next year or so. An annual report has been published on the Science pages of the Welsh Government website for each year of the Strategy.

Sêr Cymru

Research Chairs – Sêr Cymru I

The four 'star' Research Chairs are in different stages of development with their research programmes and research teams. Professor Barde (Life Sciences at Cardiff University) and Professor Durrant (Materials science for renewable energy applications at Swansea University) are the most developed while the third, Professor Barron (Energy systems resilience) is still completing his transition from Rice University, Houston, Texas, to Swansea University now that their Science and Innovation Campus research facilities are ready for use. The most recent Research Chair appointment (awarded in the summer of 2015), Professor Diana Huffaker, has started her transition to Cardiff University from UCLA, California and will take up full time residency in January 2016 working on compound semiconductors. Already, she is preparing plans for spin-out commercial activity in Wales, based on research already completed.

National Research Networks – Sêr Cymru I

These have all been set up and are now at a critical point in their development after approximately two years of operation. In all three networks there are many areas where their research is excellent and achieving international recognition We are working with the networks to build strength around these areas. They have committed most of the monetary resources and now the focus needs to shift to the generation of significant external research income (EU/Research Council/Industry).

We are closely monitoring the Life Sciences Network (led by Cardiff University), and the Advanced Engineering and Materials Network (led by Swansea University) since there are sickness and resignation issues (through moving to other posts) among the senior management of both. Professor Bonet, Director for the Advanced Materials and Engineering Network is moving to become a Deputy Vice-Chancellor in London. The third Network, Low Carbon, Energy and Environment (led by Bangor University) has the most robust leadership. We are engaging positively with all networks, highlighting areas of success and working closely where development is needed.

The three Networks have made good progress with the recruitment of Ph.D. research studentships and appointment of Post-doctoral Research Associate posts (PDRAs) and Research Fellow posts. Collectively, they have appointed 74 Ph.D. studentships and 67 Fellows and PDRAs. Although there are a small number more to appoint, the main emphasis now for the three Networks is the move towards delivery of their research strategies and building the collaborative research activities within the Networks which will enable them to deliver their research outputs and targets.

Research income reported to date for all 3 networks currently stands at approximately £22 million with 3 years left to run. The networks are increasingly providing a source of expert information and access to leading researchers for policy officials, scientific advice has been provided to the WG on fisheries, marine renewable energy and genetic research.

Rationale for Sêr Cymru II

In February 2015 the Leadership Foundation for Higher Education produced 'The Case for Growing STEM Research Capacity in Wales' by Professor Peter Halligan and Dr Louise Bright. This shows universities in Wales winning a smaller proportion of UK research funding than Wales' share of the population would suggest, for many years past. Successive attempts to strengthen research, made since the 1990s, have seen the proportion stay stubbornly low. They note this is particularly in the science, technology, engineering, mathematics and medicine (STEMM) disciplines. Achieving this elusive increase they attribute to Wales' historic shortfall in STEMM research capacity.

Analysing Higher Education Statistics Agency data they showed our universities have 4.1 per cent of total UK academic staff in the STEMM disciplines, compared to Wales' 4.8 per cent share of the UK population. We need 646 more researchers to be at Wales' population equivalent share of UK STEMM researchers. Scotland has 12.3 per cent of total UK academic staff in the STEMM disciplines for only 8.3 per cent of UK population. They showed the largest staff deficits in Wales' HEIs were noted in clinical medicine; biosciences; physics; electrical and computer engineering; mechanical, aero and production engineering, and maths, which happen to be largely disciplines covered by the highest-spending UK research councils – the MRC and EPSRC. Their report welcomed our Sêr Cymru I investment into Wales' research capacity but said more was needed for critical mass - 621 Full-time equivalent researchers in STEMM-related researchers (96 per cent of their identified shortfall). If these were in post we could expect to see Wales competitively-awarded grant capture rising significantly. They do also point out that over-emphasising our universities not capturing a notional 5 per cent of UK research funding does mislead. Wales' true research performance, in many respects, is very strong.

Sêr Cymru II

Responding to this evidence of the need for yet more effort to boost research capacity, the Welsh Government designed a series of elements, collectively called Sêr Cymru II, to be its contribution to bridging this gap. Each element is reported on separately here:

[EU Marie Skłodowska Curie Actions COFUND Research Fellowships \(Horizon2020 & match-funding\)](#)

These Research Fellowships are aimed at stellar candidates, typically three to five years on from their PhD coming from anywhere - outside the UK - to work in Wales. We aim to support approximately 90 fellowships of approximately three years each in duration. The total value of this grant is €24.1 million (with €9.5 million coming from the European

Commission). The official start date for this programme was 1 September 2015 and it was launched by the Minister for Economy Science and Transport in the Senedd on 9 September 2015. The first call went live on 7 October 2015 with the first deadline for applications on 1 March 2016.

Sêr Cymru II Fellowships

The Chief Scientific Adviser's Division had prepared a business case, very recently agreed by WEFO, for Structural Funds support for the rest of the Sêr Cymru II programme, described below. This proposal has been described as a 'backbone' project for WEFO, with a total value of £39 million (of which £23 million is from Structural Funds). A launch event took place in Brussels only on 17 November. The elements of the programme are:

- 'Rising Star' fellowships (ERDF & match-funding)

'Rising Star' fellowships will be very prestigious and highly competitive positions, designed to attract the very best 'rising stars' of academic research. The plan is for approximately 26 five-year rising star fellowship packages each funded at £0.2 million per annum to be awarded.

- 'Welsh Fellowships' scheme (ERDF & match funding)

These research fellowships will be aimed, like COFUND, at stellar candidates, typically three to five years on from their PhD coming from anywhere in the world - including the UK - to work in Wales. We aim to support about 30 fellowships of approximately three years in duration.

- Recapturing Research Talent (ERDF & match funding)

This strand is designed to provide support for researchers returning to work following a career break. The programme will support in the region of 12 fellows. We know that there is a 'brain-drain' of researchers, many of them women, who take career breaks for childcare or otherwise and find it difficult to break back into active research careers. We need to recapture that talent.

- Welsh Strategic Awards for Capital Equipment (Welsh Government funding only)

In April 2015, Universities in Wales were invited to bid for capital funding to purchase equipment for research in the academic disciplines of STEMM (Science, Technology, Engineering, Mathematics and Medicine). Applications could be made for single pieces of equipment and/or multiple smaller items with a coherent plan for use, but the total request for funding had to be between £50K and £500K. The total fund available was £1.7 million. 42 applications were received for a total value of £7.78 million. They were reviewed by our newly appointed Independent Evaluation Panel (see below). We were able to fund 7 proposals, with six awards made to a variety of researchers and research groups in Cardiff University and 1 to Swansea University, with another award pending.

The Research Excellence Framework 2014

Through the objective audit exercise of REF, our universities have demonstrated the real quality of much of their research and the equally pleasing 'impact' that we have seen from a wide range of departments. This impact (a new measure) shows how research helps the economy; society and culture in Wales in many ways. Approaching 50 per cent of our impact case studies were judged as of the highest quality level (4★) and 86 per cent was judged to be in the top two quality levels (4★ and 3★ combined). The outcome for Wales' leading research-intensive universities was very pleasing. Wales' results for

Wales' confirmed the positive findings which we saw in Elsevier's 'International Comparative Performance of the Welsh Research Base 2013' report, which the Welsh Government commissioned with Universities Wales and HEFCW. REF provides more useful and encouraging evidence.

The proportion of world-leading quality research (4★) in Wales more than doubled since RAE in 2008 and the proportion of 3★ also increased considerably, as shown in this summary table from the latest Annual report on *Science for Wales*.

	4★	3★	2★	1★	Unclassified
Wales 2014	30%	47%	20%	3%	0%
UK 2014	30%	46%	20%	3%	1%
Wales 2008	14%	35%	36%	14%	1%
UK 2008	17%	37%	33%	11%	1%

Table2: REF(2014) & RAE (2008) quality profiles, Wales & UK comparison (p. 9)

Particularly pleasing was the strength shown in STEM subjects, given the importance of these to our economy and civil society. Another table drawn from this year's Annual Report on *Science for Wales* shows this strength in science and related units of assessment (here showing 'top ten' rankings UK-wide). Ranking the institutions on the basis of their grade point average or GPA – here using the THES rankings, for the research quality profiles showed Cardiff University as sixth and Swansea University 26th in the UK.

UK Ranking	Unit of Assessment	University
1	Civil & construction engineering	Cardiff
2	Allied health professions, dentistry, nursing & pharmacy	Swansea
2	Psychology, psychiatry and neuroscience	Cardiff
3	Sociology	Cardiff
=4	Allied health professions, dentistry, nursing & pharmacy	Cardiff
=5	Education	Cardiff
6	Physics	Cardiff
=7	General engineering	Cardiff
=7	Sports & exercise sciences, leisure & tourism	Cardiff Met. & Bangor
8	Clinical medicine	Cardiff
8	Earth systems and environmental sciences	Swansea
9	Chemistry	Cardiff

Table 4: UK GPA ranking in REF research outputs by unit of assessment. (p. 10)

Importantly for the economic and social benefits enjoyed by Wales from research submitted, a number of the units of assessment (i.e. areas of research) were scored very highly across the UK, as set out in this table:

Impact in Wales: 49% rated 4*; 86% 3 or 4* (above UK average)

UK Ranking	Category	Universities
1	Psychology, psychiatry & neuroscience	Swansea joint 1 st
1	Civil & construction engineering	Cardiff 1 st
1	General engineering	Cardiff joint 1 st
1	Architecture, built environment & planning	Cardiff joint 1 st
2	Allied health professions	Cardiff
2	Sociology	Cardiff
2	Modern languages and linguistics	Bangor
4	Chemistry	Cardiff joint 4 th
5	Physics	Cardiff
5	Sport & exercise science, Leisure & tourism	Swansea
6	Psychology, psychiatry & neuroscience	Cardiff
6	Agriculture, veterinary & food science	Aberystwyth / Bangor joint submission
6	Sport & exercise sciences, leisure & tourism	Cardiff Met./ Bangor joint submission
7	Clinical medicine	Cardiff
7	General engineering	Swansea
8	Biological sciences	Cardiff
8	Geography, environmental studies & archaeology	Swansea
9	Biological sciences	Bangor joint 9 th
9	Geography, environmental studies & archaeology	Aberystwyth
9	Education	Cardiff

STEM Engagement & Education

The National Science Academy

In July 2015 the NSA had completed a strategic review of its previous two rounds of funding and, informed by this, a short Strategy for its future activities in STEM Enrichment through to 2018 was published with it, in time to be used by applicants for its current grant round which is nearing completion. This says that NSA will:

- favour projects proposed for funding which target children aged 7-14 and their parents/guardians (the ages when they are considering and deciding whether to study science subjects, with parents and guardians forming a very significant influence on such choice).
- favour projects breaking down barriers to studying STEM subjects, especially subjects where girls are underrepresented.
- provide long-term stability/certainty for programmes seen to be performing best to maximise continued delivery.

In parallel to the latest funding applications, and in keeping with its strategy, NSA has already funded these proven high-performing programmes, with £1.1 million of funding:

- a) Bangor University -GCSE & AS Science Revision
- b) BSA - CREST for Wales, for all
- c) Cardiff University - Universe in the Classroom 2.0
- d) Institute of Physics – ‘Lab in a Lorry Cymru’ 2015-2017
- e) RSC – SIAS
- f) National Eisteddfod -STEM Activities
- g) Science Made Simple - AstroCymru 2015-2018
- h) Swansea University -Technocamps:Playground Computing, Technoteach
- i) Engineering Education Scheme Wales (EESW)
- j) See Science Ltd – Science Enrichment Experiment (See)

The call for applicants was, unsurprisingly, very heavily oversubscribed with 55 bids received seeking £6.8 million total funding. From these, after a rigorous selection process, with independent expert review, nine have been identified as fit for funding.

In March 2014, NSA held a STEM engagement stakeholder event. This proved very useful and popular, allowing a very diverse sector, who are, often one in competition with each other, to meet to discuss matters of mutual concern. The NSA is happy to provide this forum for discussion.

The NSA’s Hub model has been broadened to include this wider stakeholder community. The Hub organisations continue to engage in discussion of STEM engagement in Wales through events such as this, which is appreciated, given their status as some of the larger providers of this engagement in Wales.

STEM in Education Group

As CSAW, I chair the STEM in Education Group, an internal vehicle for collaboration and information sharing with Education and Economy, Science and Transport officials: on curriculum, qualifications, teacher professional development, careers, schools marketing and NSA, meeting quarterly. Now it is the formal internal overseer of the STEM Education Delivery Plan whose publication is imminent. It also receives updates on the ongoing *Qualified for Life: Focus on Science* engagement campaign for teachers, pupils and their parents/guardians, which is Education-led.

The Committee had sight of the draft STEM in Education Delivery Plan in the spring, and that is now being updated to reflect developments with the NSA strategy and how we are taking *Successful Futures* forward. On 22 October the Minister for Education and Skills launched *A Curriculum for Wales, a curriculum for life*, the plan for taking forward Professor Donaldson’s recommendations. Since then work has moved swiftly, with the announcement of the first tranche of Pioneer Schools for the New Deal for the education workforce, and curriculum design and development. STEM enrichment activities are essential in helping bring STEM alive for young people. However, the strength of the curriculum and teacher support arrangements is critical to ensuring the flow of future STEM skills. I am encouraged by these developments, and will be following this work closely over the coming years.

I am also encouraged that the Minister for Education and Skills was able to agree to extend the Institute of Physics (IoP) and Techniquet’s pilot programme earlier this year from 12 to up to 50 schools. From this September, secondary schools across Wales are benefitting from teacher mentoring through the IoP’s successful Stimulating Physics Network programme, alongside girls in those schools accessing specific enrichment activity to encourage their progression to A-level physics. It is early days, but initial

signs are positive, and I will be looking for increased girls progression in physics as this work moves forward.

Women in Science Report

Earlier in the year I set up a group, led by two of our Pro Vice-Chancellors - Professors Karen Holford of Cardiff University and Hilary Lappin-Scott of Swansea University. It has been looking at the role of women in science, technology, engineering and maths or STEM based careers in Wales. It will recommend steps to help recruitment, retention and promotion of women in these fields – vital to the economy of Wales. Publication of this report is expected in January 2016.

Skills Policy, including Higher Level Skills

The Welsh Government published its Policy Statement on Skills in January 2014. There is a strong alignment between the Policy Statement on Skills and the development of STEM skills in Wales. This is most notably in terms of the focus on raising overall skills levels and developing higher levels of skills, the approach to regional skills delivery, and the recognition that employers and government must co-invest in the skills of the workforce.

In developing its skills policy the Welsh Government has appreciated the changing demand for skills in Wales, particularly the need for higher level skills, given the profile of future jobs. Qualification levels in Wales increased in 2014, continuing the general increase in previous years. 58 per cent of working age adults in Wales were qualified to the level 3 threshold compared with 56 per cent in 2013. The proportion holding degree-level qualifications (NQF levels 4 or above) was 36 per cent compared with 33 per cent in 2013.

We also support the work of the Regional Skills Partnerships (RSPs) in linking skills provision to the needs of the labour markets across the three regions: North, South West and Central, and South East. The work with Regional Skills Partnerships will potentially enhance and exploit the demand for STEM skills amongst employers. It will enable close working with those sectors in Wales with a high demand for STEM subject areas. Positively, the RSPs are considering the regional skills requirements from major infrastructure and investment projects, such as the Swansea Tidal Lagoon, a number of which have a strong foundation in STEM subject areas.

The Welsh Government's Framework for Co-investment in Skills provides added weight to the development of STEM skills in Wales. This is specifically in terms of the commitment to support and prioritise Higher Apprenticeships, given that a number of STEM subject areas are associated with this form of vocational learning. The engagement in Higher Apprenticeships continues to improve with 5,355 unique learners undertaking Higher Apprenticeships in 2013/14, compared to 2,720 in 2012/13, and this is consistent with apprenticeship delivery as a whole.

EU Funding in support of building research capacity – especially Horizon 2020

It is early to try and attribute improvement in Wales' research performance to elements of the Sêr Cymru programme. Figures for Sêr Cymru I elements are reported above but Sêr Cymru II has only just started to move. Horizon 2020 is administered centrally by the EU and we would be pleased to see more activity from Welsh HEIs taking active steps to access more of this funding themselves, perhaps using Welsh Government funding already provided under Sêr Cymru or ERDF funding from WEFO.

Our success in gaining Marie Skłodowska Curie COFUND funding for SIRCIW ('Strengthening International Research Capacity in Wales') is very positive – we were successful against really stiff competition from right across Europe. It is worth noting that other successful applicants included CERN in Geneva and the UK's Science and Technology Facilities Council for work at its prestigious campuses, such as Daresbury and Harwell. We are hopeful that negotiations with WEFO will see us able to deliver a lot more Fellowship activity across Wales but the procedures we have to go through are not quite completed at the time of writing.

It should be emphasised that gaining the COFUND award, which was secured by staff in my team, was a considerable achievement. The prospective figures for the programme are reported above. We are not presently considering further applications as the chance of winning further funding, on top of this major sum, is slim. We will continue to monitor the situation and remain alert to opportunities but feel, presently, that we have already secured a lot and need to make the smooth delivery of the programme in Wales our priority now. COFUND sits alongside a prospective ERDF funding bid from WEFO – an effective use of complementary funding sources to deliver the differing elements of a cohesive programme to drive up research capacity in Wales. The EU are interested in this alignment of funding sources to achieve larger programmes with requests to use Welsh examples of best practice already made.

I understand that there were ultimately no awards to Welsh Universities in gaining FP7 European Research Council Chairs, despite at least two very strong bids which came close to being successful.

Two of our National Research Networks work in the research fields of low carbon, energy and environment and advanced engineering and materials. Both have research interests in the maritime sphere and will continue to be supportive of existing economic activity, in fields such as tidal energy.

Horizon 2020

While early in the programme period, so we cannot confirm statistical trends, it is clear that Horizon 2020 is more competitive than its predecessor FP7 - many programme areas are heavily oversubscribed. Against this, Welsh organisations' performance has been encouraging in many areas. Data, from 17.7.2015, shows 44 Welsh participants were selected for funding, involving EU funds of €17.6 million. This doesn't reflect recent successes such as COFUND. Welsh businesses have made several successful bids. These will be announced in the Autumn.

Higher Education continues to perform well. Cardiff University won funding of some €15.8m. There is an increased focus on innovation in Horizon 2020, compared to FP7 - a new challenges for the sector. The Welsh Government seeks to help them address this challenge.

CM International did a Horizon 2020 Scoping Study, examining how best to support Welsh organisations to access the funding. It endorsed the Welsh Government's Horizon 2020 Unit approach, of working closely with key stakeholders in Wales, the UK and Europe to co-ordinate and facilitate actions to maximise the Horizon 2020 opportunities for Welsh organisations. The unit is taking study recommendations forward under five key objectives. Notable progress has already been made.

Research for the study looked at comparator regions and countries: Catalonia (Spain) Skåne (Sweden) and Ireland, Scotland and Northern Ireland. The Horizon 2020 Unit regularly shares best practice with similar units in Ireland, Scotland and Northern Ireland and works with the Welsh Government's and Welsh Higher Education's Brussels office. The unit's work with stakeholders is focussing

The Unit is impacting on stakeholders in Wales' approach to Horizon 2020. Integrated investments, targeted support and common objectives with stakeholders will give a long term sustainable increase in Welsh organisations winning Horizon 2020 funds.

The work of the EU Ambassadors is also helping to build the networks needed to maximise the opportunities for Welsh organisations looking to access Horizon 2020. As Chief Scientific Adviser for Wales I have recently engaged with the EU Ambassador for Horizon 2020, Interreg and R&D funds (Dr Grahame Guilford).

A number of capacity building investments have already been made, including the £35 million (including £20 million of European Regional Development Fund (ERDF) support) for the Aberystwyth Innovation and Enterprise Campus and the £44 million (including £4.5 million ERDF) for the Cardiff University Brain Research Imaging Centre.

With the three SMART schemes (SMART Innovation, SMART Cymru and SMART Expertise) we have put in place an integrated suite of interventions that will drive the innovative behaviour we need in Wales in order to access funding such as Horizon 2020

You have heard from the Minister for Finance and Government Business recently on the potential Welsh uses there could be for monies from the European Fund for Structural Investment and European Investment Bank. I would echo her evidence – Swansea University has already used EIB funding for its ambitious second campus development and I am sure there are other investments which our Universities could consider making, backed by these funds.

Agenda Item 3

Paper to the Enterprise and Business Committee Innovation Advisory Council for Wales

Introduction

1. The purpose of this paper is to set out written evidence on the progress of the Innovation Advisory Council for Wales and to highlight the importance of the innovation agenda in Wales.

Role of the Council

2. The Innovation Advisory Council for Wales (IACW) was launched in October 2014 and consists of representatives from public services, higher education and business to reflect the wider range of views on innovation.

3. The Council was set up to advise the Welsh Government on a broad range of innovation matters to help grow and sustain Wales' economy and improve the wealth and wellbeing of the people of Wales. It provides advice and updates the Welsh Government on emerging trends and developments, and aims to identify areas of existing strength and future opportunity using the Smart Specialisation approach identified by the European Commission.

4. IACW provides advice on innovation strategy, policy and priorities to allow the Welsh Government to make effective use of available means of support in formulating and implementing policies to support the full range of its objectives.

5. The Council has held 4 meetings to date with a further meeting planned at the end of November. In addition to the 4 official meetings, members are involved in work streams; provide advice to WEFO on potential EU funded projects; and have met the Minister for Economy, Science and Technology on several occasions to provide an update on the progress of the Council.

6. IACW aim to improve Wales' innovation profile on a world wide basis.

Plans for the future

7. At the inaugural meeting, IACW decided on the following priorities that could enhance innovation in Wales:

- International Collaboration – to ensure Welsh organisations collaborate effectively to improve Wales' share of UK and European grant funding; and promoting Wales as a distinctive and connected innovation nation and a valued partner for collaborative projects;
- Measures and brand – understanding the true state of innovation in Wales by developing better – and real time – measures of innovation and its impact;
- Centres – aiming to increase RD&I in Wales through developing and supporting applied research centres; and helping Innovate UK to implement the Hauser Review

by identifying business and research strengths in Wales for consideration as potential future applied research centres;

- Public sector – working with the Public Services Innovation Lab, Y Lab, to identify opportunities to be more innovative in the delivery of public services, and providing greater scope for business to generate innovative solutions.

8. The Minister for Economy, Science and Technology attended the May Council meeting. Several recommendations were made to the Minister, including investigating the creation of a National Innovation Body (NIB) for Wales. It is argued that NIBs have had a positive impact in other EU regions. The Minister proposed an initial scoping study be undertaken.

9. IACW commissioned Nesta and Cardiff University to undertake some research looking at options for the scope, services and governance arrangements of a National Innovation Body for Wales. The report analysed worldwide NIBs to understand the role, responsibility and governance regime that may be suitable for Wales. The paper was supported by the Council and was presented to the Minister in October.

10. The Minister welcomed the paper and requested further research be commissioned to outline the role, responsibility and resource required for a Wales NIB. This report will be completed and presented to the Minister in the new year. In parallel to the report being prepared, IACW will be carrying out stakeholder engagement to solicit views and support from key individuals from both business and cross government on the concept of a NIB in Wales.

11. IACW Chairs are in the process of producing an annual report highlighting the progress made by the IACW over the last year. The report will focus on highlights, progress update and actions already achieved.

Achievements of the Council

12. As identified above, 4 innovation themes were identified that could enhance innovation in Wales. Key projects that Wales could collectively focus on from an innovation perspective have been narrowed down. Business cases are currently being developed for each theme.

13. The centres group identified 3 areas of research expertise and business strength in Wales and submitted a brief proposal to Innovate UK on the areas for future Catapults. The areas identified include Medical Technologies, Advanced Structural Materials and Compound Semiconductors. The proposals were well received by Innovate UK. Medical technologies and Advanced Structural Materials were added to the long list of future Catapult areas. Compound Semiconductors was added to the short list of future Catapults and is undergoing active consideration. Consultation has been taking place in the form of consultation events, where Wales has been well represented.

14. IACW has requested an increase in the sample size of Welsh companies in the UK Innovation Survey. The deadline for the upcoming survey has passed, but the increase in the number of companies surveyed in Wales will be included in the following survey.

15. IACW has commissioned the Innovation Dashboard Wales (Arloesiadur) project. This project aims to capture real time mapping and changes which will provide policy makers with a better understanding of developments in the Welsh innovation system, using novel mapping methodology to identify Wales' existing and emergent areas of smart specialisation and evaluating appropriate policy interventions. The Dashboard project is a global first which is likely to generate lots of interest among other nations and regions looking to systematically grow their innovation capacity. Council members played a key part in forming this project.

16. A working group has been created between IACW members and WEFO to provide advice to WEFO on the strategic fit of potential European projects. The advice received so far from the working group has already helped tailor proposed projects to increase impact.

Importance of innovation to the creation of jobs and economic growth

17. The BIS Innovation Report 2014: Innovation, Research and Growth suggests "Innovation is the engine of economic growth and improved living standards. Innovation is vital for prosperity. Using knowledge effectively enhances productivity and welfare and creates new UK market opportunities. Innovation has been, and will continue to be, a key driver of UK growth and economic prosperity, accounting for up to 70 per cent of economic growth in the long term. It enhances health and welfare and helps us to address key challenges facing society such as ensuring clean and sustainable energy and food security, and responding to demographic change."

18. The EU's Europe 2020 Flagship Initiative Innovation Union states, "As public deficits are reined in to repair public finances and as our labour force begins to shrink, what will be the basis for Europe's future competitiveness? How will we create new growth and jobs? The only answer is innovation, which is at the core of the Europe 2020 Strategy agreed by Member States at the June 2010 European Council, underpinning the smart, sustainable and inclusive growth the Strategy is aiming for. The "Innovation Union" is one of the seven flagships announced in the Europe 2020 Strategy. It aims to improve conditions and access to finance for research and innovation, to ensure that innovative ideas can be turned into products and services that create growth and jobs."

Emerging trends and latest developments in innovation in Wales

19. There are a number of areas in which Wales is developing its innovation strengths. These include:

- Precision Medicine sector – The Precision Medicine Catapult announced in October that Cardiff will be one of the six locations identified to host a regional centre of excellence network. The centre will act as a hub for regional precision medicine activities within the UK-wide network;
- Compound semiconductor – Funding has been secured to develop the Compound Semiconductor Research Foundation to support research, development and innovation within the area which is the first of its kind in the UK and has the potential to become a leading cluster in Europe;

- SPECIFIC Innovation and Knowledge Centre (IKC) – SPECIFIC aims to address the challenge of low carbon electricity and heat by enabling buildings to generate, store and release their own energy, in one system, using only the energy from the sun;
- IBERS is an internationally recognised research and teaching centre providing a unique base for research in response to global challenges such as food security, bioenergy and sustainability, and the impacts of climate change;
- The Aberystwyth Innovation and Enterprise Campus at IBERS received £35.5M funding from WEFO and the BBSRC. The infrastructure, facilities, advanced technology expertise will also help businesses translate innovations and investments in basic plant science, food supply chain, nutrition and environmental research into new products, processes and services;
- Public Services Innovation
 - SBRI – funds the development of innovative solutions to challenges faced by the public sector, leading to better public services and improved efficiency and effectiveness;
 - Y Lab – Cardiff University, Nesta and Welsh Government established Y Lab to devise and test new solutions to major public services challenges in Wales. Academics in Cardiff University and innovation experts in Nesta will be working to model different approaches to society’s challenges in action, helping to make sure that the public sector responds in the best possible way to deliver effective and efficient outcomes;
- Health innovation
 - Life Science Hub and Fund - brings together academic, business, clinical and professional services and funding organisations;
 - GE Healthcare Innovation Village - designed to help life science start-ups and spin outs;
 - Health Technology Challenge - The Challenge aims to develop cross sector collaborative research projects focusing on medical technologies that translate innovative research in material sciences and engineering towards bio-medical applications.
- The Welsh Government pioneered the Open Innovation pilot project to encourage innovation collaboration between large and small businesses and other potential partners, for the benefit of the Welsh economy.

Strengths and weaknesses of Wales as a place to innovate and undertake R&D

20. Strengths

- Wales has pockets of world class expertise in academia in areas with commercial potential;
- Wales has a number of key multi national ‘anchor’ companies and clusters of smaller companies in niche areas;
- Wales is part of the UK Research Base which is considered to be world class in e.g. science and engineering graduates;
- Recent data indicates a well developed and effective knowledge transfer system between HE and business. Welsh universities performed extremely well in the REF results on the impact of research measure;

- Funding is available to support innovation including dedicated structural fund projects and funding for support to companies and academia;
- Growing group of incubators especially in South Wales – ICE, TechHubs, Indycube and others in development;
- New Accelerated Growth Programme offers individual support to high growth businesses, funded by structural funds.

21. Weaknesses:

- Lack of PLCs, company HQs and R&D intensive businesses which impacts on the draw down of Innovate UK and H2020 funding;
- Few venture capital/private equity players in Wales;
- No Higher Education Innovation Fund in Wales;
- Weak external perception of Wales as a base for knowledge based companies;
- Limited specialised facilities in some areas e.g. Wetlabs;
- Low economic activity, low GVA per head, low wages and lack of employment opportunities;
- Lower business expenditure in R&D than OECD average reflecting the above company demographics.

Effectiveness of Welsh Government support for innovation and R&D and The impact of EU funding initiatives on innovation activity in Wales

22. Welsh Government offers dedicated programmes of support for RD&I. Support in England is only available from Innovate UK, whereas in Wales, organisations have the chance of accessing the support from both the Welsh Government and Innovate UK.

23. Combined totals for the 3 European funded RD&I programmes from 2007-2013 indicate:

- £32m investment induced
- £23m profit benefit
- 2,184 enterprises assisted and 115 enterprises financially assisted
- 733 products/processes registered and 1,020 products/processes launched
- 561 collaborative R&D
- 443 jobs created

24. There are signs that the poor performance in business R&D in Wales is improving.

25. There has been an increase in Innovate UK spend in Wales. Total grant offers made in Wales last year was £7.9m. In the first 6 months of this year, total grant offers have already exceeded £13m, with further announcements expected in the Autumn.

26. Wales recorded the largest reported increase (37%) in BERD expenditure as detailed in the latest 2013 results (following strong 2012 results).

27. According to the UK Innovation Survey 2013, 46% of firms in Wales are innovation active. Wales is the leading UK nation.

Impact of the Council on Welsh Government innovation policy

28. The Council has provided independent advice and challenge to the Welsh Government's innovation policy. The Council has instigated a number of new work areas, such as measurement of innovation, the setting up of applied R&D centres, promoting public sector innovation and produced a series of recommendations for the Minister.

The use of the 'smart specialisation' approach in Wales

29. A sub-group of the Council has provided assistance to WEFO by assessing all potential ERDF funded innovation projects for a fit with Wales' 'smart specialisation' priorities. The Council has also been asked to provide advice on a Welsh approach to the 'Entrepreneurial Discovery Process' intended to identify emerging areas of specialisation.

Progress to date of 'Innovation Wales'

30. At the first meeting of IACW a delivery plan for Innovation Wales was presented to the Council. Substantial progress has been made against the 14 'Action Areas' and the Council will be presented with an updated delivery report at the next meeting.

31. However, three particular areas of progress in the last year have been:

- Action Area 1: Collaborating with external funding bodies.
This year has already been a record year for winning funding from Innovate UK, and work to attract Catapult activity to Wales and to support the SPECIFIC IKC in Baglan has brought success.
- Action Area 11: to develop a culture of open innovation.
The Welsh Government initiated a support programme with a number of Anchor Companies, such as General Dynamics, GE Healthcare and Airbus to develop innovation within their supply chains. The approach has been well received by the businesses and has been replicated by Scotland.
- Action Area 12: Encourage the public sector to support innovative methods of procurement.
The SBRI Catalyst Fund has supported projects with a range of public sector bodies such as Health Boards, NRW, South Wales Police, Cardiff Council to help them find innovative solutions to their problems (e.g. increasing contact time for nurses with their patients). The Welsh Government team has provided evidence to the Cabinet Office in Whitehall on the success of the SBRI approach in Wales, and are also sharing best practice with colleagues in the other Devolved Administrations.

32. IACW will continue to work with the Public Services Lab to trial new ways of bringing business innovation into public services in Wales.

Rt Hon Stephen Crabb MP
Wales Office
Gwydr House
Whitehall
London
SW1A 2NP

16 November 2015

Dear Stephen,

Draft Wales Bill

The Enterprise and Business Committee took the opportunity to discuss the Draft Wales Bill at our meeting on 5 November 2015.

While we understand that this is a draft bill, and far from the finished product, nonetheless the Committee has grave concerns about the Bill as it is currently drafted. I understand that there will be further discussions between the Welsh Government and the Wales Office but we feel that in many areas there is a level of ambiguity in the drafting such that we are not able to comment on it without further clarification.

The Assembly's Constitution and Legislative Affairs Committee is leading in relation to the 'tests' that apply to the Assembly's legislative competence, so I have restricted the committee's initial comments to the reservations that relate to our remit.

In our committee discussion, a room full of experienced legislators struggled to understand what the bill does and what it is seeking to do. For those who are not used to reading and drafting laws, it is – in its present form – very difficult to understand. Clarity and workability are important principles when it comes to legislation, and I am sure that more can be done in this regard.



Within the Committee's remit there are a number of areas which are directly affected by the proposed Reservations listed in Schedule 7A of the draft Bill and grouped under three main 'Heads': Trade and Industry, Transport and Employment.

In Annex A I have set out a summary of the concerns the Committee has in those areas and specific questions. I am writing in the hope that your office will provide the Committee with a clear steer of the effect of the provisions on the existing competence of the National Assembly for Wales, and an explanation where the competence has been reduced.

These questions set out our initial concerns regarding the scope of the Bill. We anticipate having further discussions as a committee once greater detail emerges and I will write to you as the Bill progresses.

Kind regards,



William Graham

Chair, Enterprise and Business Committee

Cc. David Melding, Chair, Constitutional and Legislative Affairs Committee,
National Assembly for Wales

David Davies, Chair, Welsh Affairs Committee



The Draft Wales Bill – Enterprise and Business Committee

Annex A

The Enterprise and Business Committee of the National Assembly for Wales is seeking clarification on the following specific areas of the Draft Wales Bill:

Schedule 7A – Head C – Trade and Industry

1.0 Section C6 Consumer protection

- 1.1 The current exception in Schedule 7' GOWA prevents the Assembly from legislating about *'consumer protection, including the sale and supply of goods to consumers, consumer guarantees, hire purchase, trade descriptions, advertising and price indication.....'*
- 1.2 The new settlement includes a more detailed description of what the reservation 'consumer protection' includes. For example, in reservation 70 the additional words 'supply of services to consumers'
- 1.3 are included in the new settlement which do not appear in the current exception in relation to consumer protection Schedule 7, GOWA This wording of this reservation is therefore, narrower.

The Committee would like clarification of whether the supply of services to consumers applies only within the context of the Sale of Goods Act 1979 or is it intended to apply further across different types of services to consumers more generally, e.g. bus services etc.

- 1.4 Further, the new settlement includes the wording *'safety of, and liability for, services supplied to consumers'*. This wording is also not currently contained in Schedule 7, GOWA and is therefore, a **reduction** of the Assembly's competence.

The Committee wishes to understand why this competence is potentially reduced.

- 1.5 In relation to reservation 72 and reference to 'estate agents', as the Assembly is currently able to legislate on the 'promotion of business and competitiveness' and 'estate agents' are not specifically referred to in Schedule 7 this reservation therefore, **potentially reduces** the Assembly's competence in relation to 'estate agents'.



The Committee wishes to understand the intention of this potential reduction of competence.

2.0 Reservation C7 Product standards, safety and liability

2.1 The new settlement reservation refers to *‘technical standards and requirement in relation to products in pursuance of an obligation under EU law’*

2.2 It is not clear if this reservation has the effect of preventing the Assembly from making legislation which engages the Technical Standards Directive.

The committee would welcome further clarification on the scope of reservation 75.

2.3 The following wording is not clear – *‘the national accreditation body and the accreditation of bodies which certify or assess conformity to technical standards in relation to products or environmental management systems.’*

The committee would welcome further clarification on the meaning of reservation 76.

3.0 Section C12 Assisted areas and limits on financial assistance to industry

3.1 Reservation 89 limits the Assembly’s competence in relation to:

Section 1 and Section 8(5) (7) of the Industrial Development Act 1982 (‘the 1982’ Act)

3.2 Section 1 allows the Secretary of State by Order to specify any areas of Great Britain as a development area or intermediate area. Further, Section 8 allows the Welsh Ministers to provide financial assistance for industry.

3.3 While executive powers are retained for the Welsh Ministers under Section 8 of the 1982 Act, the inclusion of the subject matter of the 1982 Act potentially **narrows the Assembly’s ability to legislate under** the current wording of Schedule 7 of GOWA and general heading ‘economic regeneration and development’.

The Committee wishes to understand why the Assembly’s ability to legislate is being narrowed in relation to the Industrial Development Act 1982.



3.4 C15: Assistance in connection with export of goods and services etc

3.5 Reservation 92 relates to the subject matter of '*the Export and Investment Guarantees Act 1991*'. The Welsh Ministers have some powers under the 1991 Act that enable them to support exporters. Further, some of the provisions of the 1991 Act are within the Assembly's current competence under Economic development, specifically '*the promotion of business and competitiveness*'. This is therefore, a **reduction** in the Assembly's competence

The Committee wishes to understand why this competence is being reduced and clarity of the scope of this reservation is needed.

4.0 New powers in Transport

4.1 The Assembly would **gain competence to legislate** under the new settlement in relation to:

- Registration of local bus services, and the application and enforcement of traffic regulation conditions in relation to those services
- Speed limits – save for exemptions from speed limits i.e. speed limits for emergency services
- Taxi and private hire vehicle licensing
- Private hire vehicle operator licensing
- Harbours, but not safety standards in harbours

4.3 Under the draft Bill, further **executive powers to the Welsh Ministers** will be granted in relation to:

- speed limits
- Welsh harbours
- certain executive functions in relation to Taxis
- certain executive functions in relation to Traffic Commissioners

The committee welcomes these additional powers in areas for both the Assembly to legislate and the increase of executive powers to the Welsh Ministers in relation to these specific subjects



The following sets out the Committee's view concerning specific reservations under Head E- Transport of the draft Bill.

5.0 Section E1 Road transport

- 5.1 Reservation 111, concerns driver licensing and includes (training, testing and certification) whereas under Schedule 7, GOWA '06 it is only referred to as 'driver licensing'.
- 5.2 The wording therefore, is narrower under the new settlement and the inclusion of the word 'training' could impact on the Assembly's ability to legislate in relation to the promotion of road safety.
- 5.3 This is therefore, a **reduction in the Assembly's competence** and further clarity on the scope of this reservation is required.

The committee would welcome further clarification on the scope of this reservation. Also, clarification is sought that the Assembly will be able to continue to legislate in relation to the promotion of road safety.

- 5.4 Further, the Committee notes that traffic signs are a specific reservation, 117, which doesn't seem logical, given the new powers on speed limits generally.

The Committee would welcome additional clarification of what is intended.

6.0 Section E2 Rail transport

- 6.1 The current exception under Schedule 7 GOWA, refers to 'provision and regulation of railway services' whereas under the new settlement, reservation 123 only states '*railway services*'
- 6.2 This is therefore, a **potential reduction** in competence and further clarification is needed on the scope of this reservation.

The committee would welcome further clarification on the scope of this reservation and wishes to understand the intention of this potential reduction of competence.

7.0 E3 Marine and Waterway transport



7.1 The current exception under Schedule 7, refers to ‘shipping’ with two specific exceptions relating to financial assistance for shipping services to and from or within Wales and regulation of the use of vessels carrying animals. However, the new settlement the reservation refers to *‘shipping and other marine and waterway transport including the subject matter of.....)’* This is therefore, a **reduction** in the Assembly’s competence.

The Committee wishes to understand why this competence is being reduced.

7.2 The wording of reservation 128 in relation to Search and rescue and coastguard services is unclear.

The committee would welcome clarification that this phrase does not include the fire and rescue services.

8.0 E6: other matters

8.1 The current exception in Schedule 7 refers to ‘technical specification for fuel in use of internal combustion engines’ whereas the new settlement under reservation 137 refers to the same issue:

‘technical specifications for fuel or other energy sources or processes for use in road, rail, marine waterway or air transport’

8.2 The wording under the new settlement is more restrictive and encapsulates other wider forms of transport, and means of propulsion other than internal combustion engines, so is therefore, a **reduction** in competence.

The Committee wishes to understand why this competence is being reduced.

9.0 Bus Regulation

The potential for the regulation of buses in Wales is an area which the Committee has previously been interested in and the Welsh Government has said it requires further powers. An example was provided to the Committee illustrating how Bus Regulation might be viewed in the new settlement is provided below.



- 9.1 Example: *Under the new settlement, there is now scope for the Assembly to legislate concerning local bus registration. Aside from these, Department for Transport told the Committee in September 2015 that it believed that the Assembly / Welsh Ministers already had powers to regulate buses.*
- 9.2 *There are also currently limited executive powers for the Welsh Ministers / local authorities to co-ordinate bus operations under current legislation, these are set out in the Transport Act and Local Transport Act 2008, and include Voluntary and Statutory Partnerships and Statutory Quality Contracts.*
- 9.3 *Both the above-mentioned levers in theory should allow for the regulation of buses in Wales. However, there is a caveat to this. This because some of the associated benefits of regulation include the possibility of capping and regulating fares and integrated ticketing. It is not clear whether issues such as these would be caught by the following reservations:*

***C3: Competition: reservation 67** 'Regulation of anti-competitive practices and agreements; abuse of dominant position; monopolies and mergers.'*

***C6: Consumer protection: reservation 70** 'Regulation of the sale and supply of..... services to consumers'*

The committee would welcome clarification that the draft Bill will allow for the regulation of buses in Wales – including issues such as fares and integrated ticketing not being caught by the above mentioned reservations should such an option be pursued in Wales.

10.0. Schedule 7A – Head H – Employment

10.1 Section H1 – Employment and industrial relations

- 10.2 Currently, the Assembly can legislate on 'silent subjects' i.e. (it is neither a devolved subject, nor an exception under Schedule 7) provided it is related to a 'conferred subject' under Schedule 7 of GOWA and the current settlement.



- 10.3 This was confirmed in the Supreme Court decision in light of the Agricultural Sector (Wales) Act 2014 where the Act was within competence despite it both relating to a devolved subject ‘agriculture’ and a silent subject ‘employment’
- 10.4 In the new settlement a silent subject ‘employment’ has become a specific reservation under Head H *‘Employment rights and duties and industrial relations including the subject of.....’* [and reference to a list of specific Employment legislation].
- 10.5 Further, a specific exception has been made to this Reservation which excludes *‘the subject-matter of the Agricultural Sector (Wales) Act 2014’* and protects the subject-matter of this Act.
- 10.6 Including ‘employment’ as a reservation in the current settlement in combination with the new legislative tests is a **significant reduction** in the Assembly’s competence in the context of employment.
- 10.7 There is also another Head under the new settlement – ‘the professions’ that includes not legislating on health professionals which seems a broader reservation than the current exception in Schedule 7, GOWA.
- 10.8 The Committee was provided with the following example of how might a proposed Bill in the new settlement be considered:
- *Proposed future Bill that is seeking to legislate on wages, conditions and training in social care sector – similar to Agricultural Sector (Wales) Act 2014.*
 - *Under present settlement in light of Supreme Court decision on 2014 Act – Bill concerning social care sector would be within competence.*
 - *Proposed reservation of ‘employment rights and duties and industrial relations’ under Head H, Section H1 of Schedule 7A – likely to take to same Bill **outside competence.***
 - *The single exception for the subject matter of the 2014 Act makes this more likely – implying that whilst agricultural wages, holidays and training are within competence, these will be reserved in other sectors.*

The Committee wishes to understand why this competence is being reduced in relation to legislating on ‘silent subjects’ such as Employment provided they



‘relate to’ a ‘conferred subject’ under Schedule 7. This is of great concern to the Committee.

11.0 Section H3 – Job search and support

11.1 Reservation 156 ‘Arrangements for assisting persons to select, train for, obtain and retain employment and to obtain suitable employees’ potentially narrows the Assembly competence on economic development under Schedule 7 GOWA.

The Committee wishes to understand what this reservation is expected to capture.

12.0 Particular areas of uncertainty in relation to Executive powers

12.1 Devolution of the Wales and Borders Franchise and transfer of the executive functions of the Welsh Ministers is not dealt with in the draft Bill.

12.2 The St David’s Day announcement and paragraph 2.5.10 of Powers for a Purpose document stated:

12.3 *‘The UK Government is devolving executive franchising functions to the Welsh Government, to enable them to lead on the procurement and management of the next Wales and Borders franchise.’*

The Committee would welcome clarification on how the UK Government is proposing to devolve executive functions to the Welsh Ministers in respect of the Wales and Borders Franchise, given that this is not provided for within the draft Bill.

12.4 Further, the Welsh Government has previously requested that a change be made to the Railways Act 1993 that would allow public sector bodies to bid for franchise contracts. This would mirror the position for Scotland where provision is provided for in relation clause 49 of the Scotland Bill ‘Rail: franchising of passenger services’. Similarly, provision has not been made in the draft Bill.

12.5 In discussing the implications of the Smith Commission for Wales, the St David’s Day announcement said analysis of “relevant Smith recommendations in the Welsh context” would be undertaken “to enable



decisions to be taken early in the next Parliament on which might be implemented for Wales”.

- 12.6 Department for Transport officials told the Committee in September 2015 that the issue was being actively considered: *“the UK Government agreed to consider which non-fiscal parts of the Smith Commission agreement, including that commitment, might be implemented for Wales. That consideration is on-going, and further discussions with the Welsh Government will take place shortly in the context of preparing the Wales Bill”*.

The Committee would welcome clarification on what progress has been made in including this Smith Commission provision in the Wales Bill.



Agenda Item 6

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Agenda Item 7

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Agenda Item 8

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